

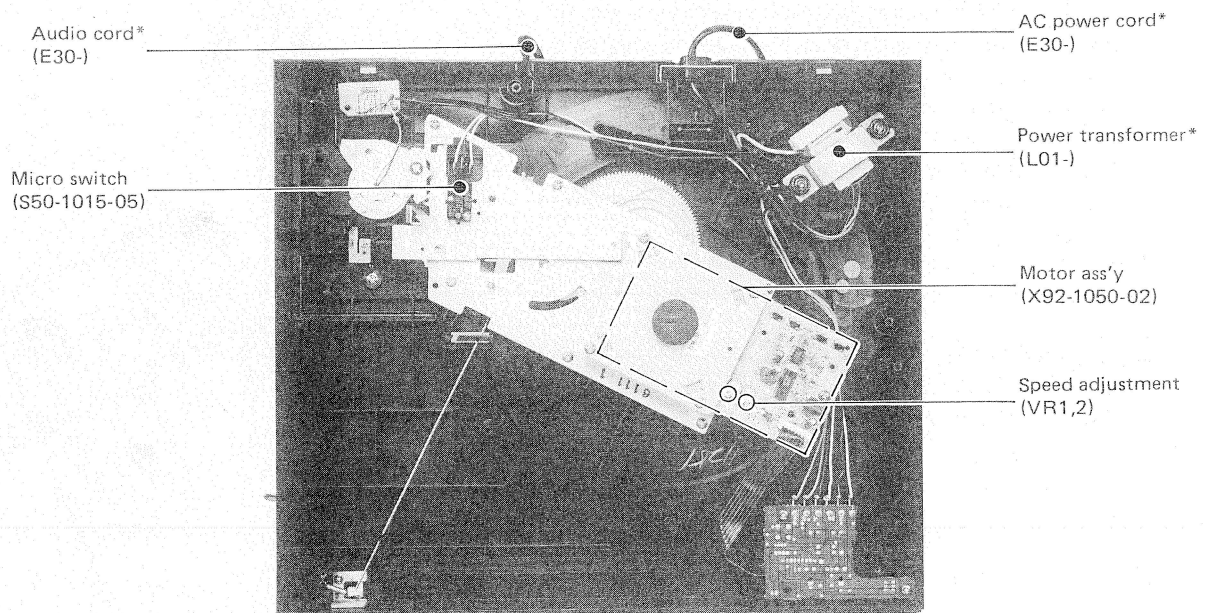
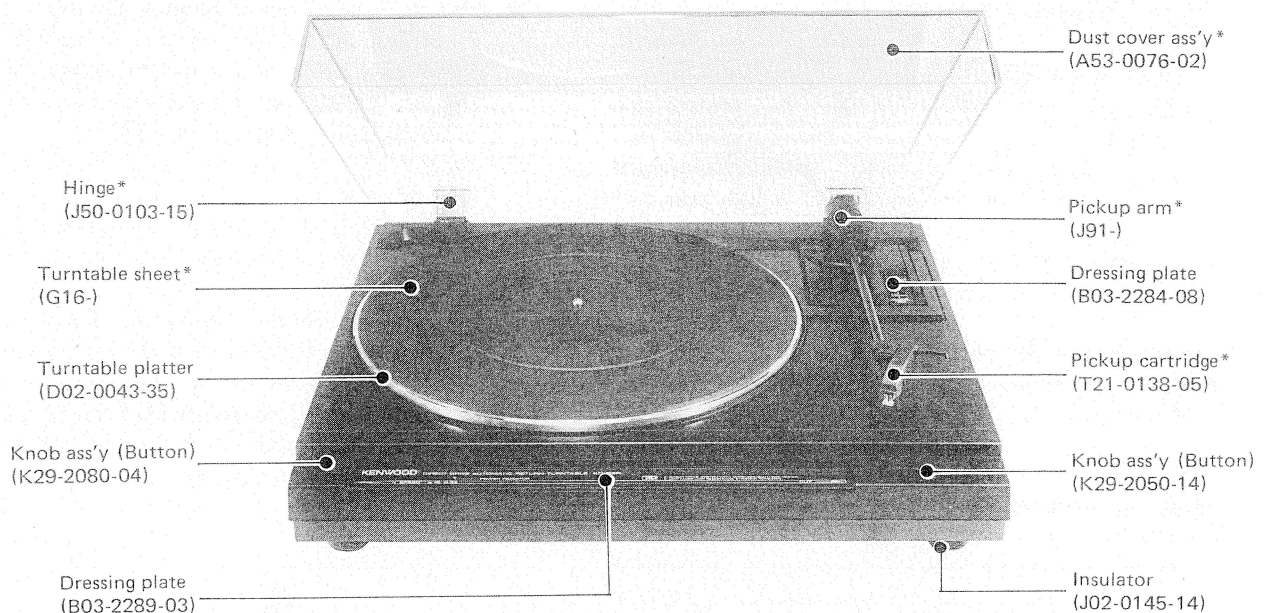
DIRECT DRIVE AUTOMATIC RETURN TURNTABLE

# KD-56R

## SERVICE MANUAL

# KENWOOD

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B51-3220-00 (O) 2170



\*Refer to parts list on page 8.

Photo is KD-56R.

## ADJUSTMENT/REGLAGE/ABGLEICH

### ADJUSTMENT

#### Stylus height adjustment

- (1) Loosen the lifter screw ①
- (2) Adjust the vertical position of the lifter so that the stylus is positioned at an appropriate height (8 m/m).

#### Auto-return position adjustment

- (1) Set a screwdriver as shown Fig. 1. Turn it counter-clockwise to shift the auto-return position outward, and vice versa. ②
- (2) When using test record (W05-0036-00), perform the following.
  - (a) The auto-return mechanism should not operate until the count of 21 is reached on the latter half of the side B.
  - (b) The auto-return mechanism should operate between the counts of 1 and 4 on the side A.

#### Speed adjustment (45 rpm, 33 1/3 rpm)

- (1) Adjust the trimming pot (VR1,2) on the PC board. (Refer to internal view on page 1).

### REGLAGE

#### Réglage de la hauteur de pointe de lecture

- (1) D'esserrer la vis de lève-bras ①
- (2) Ajuster la position verticale du lève-bras de façon à ce que la pointe de lecture soit placée sur la hauteur appropriée (8 m/m).

#### Réglage de la position de retour automatique

- (1) Placer le tournevis de la manière indiquée Fig. 1. La tourner vers la gauche (sage de la horloge de jeton) afin de centrer la position de retour automatique vers le dehors et vice-versa. ②
- (2) Lorsqu'on utilise le disque d'essai (W05-0036-00) procéder de la façon suivante.
  - (a) Le mécanisme de retour automatique ne doit pas fonctionner jusqu'à ce que le numéro 21 soit atteint sur la dernière partie de la B face.
  - (b) Le mécanisme de retour automatique doit fonctionner entre les numéros 1 et 4 de la A face.

#### Réglage de vitesse (45 t, 33 1/3 t)

- (1) Ajuster la résistance trimmer (VR1,2) du circuit imprimé. (Voit page de couverture).

### ABGLEICH

#### Höhe Abgleichen der Nadels

- (1) Die Lifthebelschraube ① lösen.
- (2) Die senkrechte Position des Lifthebels so justieren, daß sich die Nadel auf der richtigen Höhe befindet (8 m/m).

#### Justieren der Position der Rückführautomatik

- (1) Einen Schraubendreher wie Fig. 1 gezeigt einsetzen. Diesen nach links (Weisen der Uhr spielmarkes) drehen, um die Position der Rückführautomatik nach äußere zu verschieben, und umgekehrt ②
- (2) Bei Verwendung der Testplatte (W05-0036-00) wie folgt verfahren.
  - (a) Die Rückführautomatik sollte erst in Funktion treten, wenn die Zahl 21 auf der zweiten Hälfte der Seite-B erreicht wird.
  - (b) Auf der Seite-A sollte die Rückführautomatik zwischen den Zahlen 1 und 4 in Funktion treten.

#### Abgleichen der Geschwindigkeites (45 rpm, 33 1/3 rpm)

- (1) Den Justierwiderstand (VR1,2) auf der Leiterplatte einstellen. (Siehe Umschlagseite).

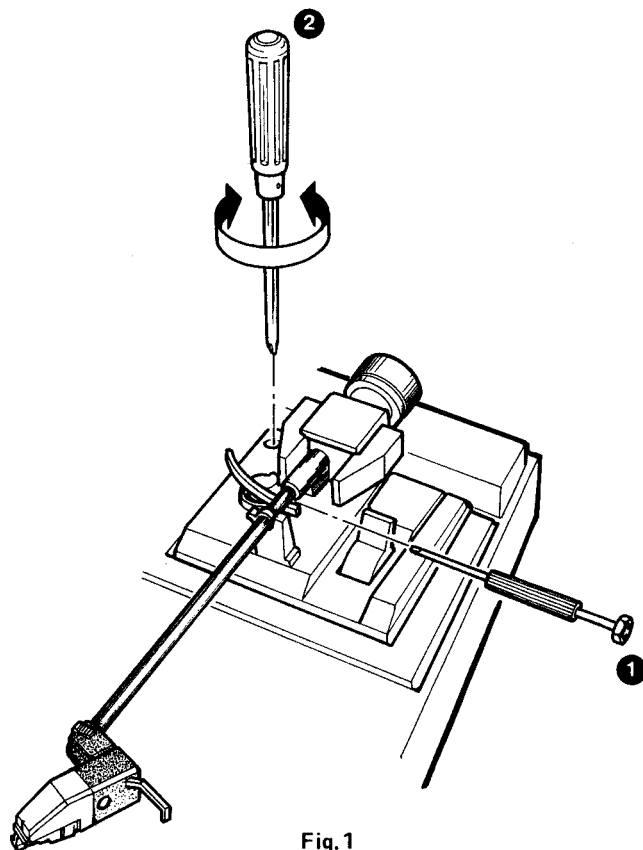
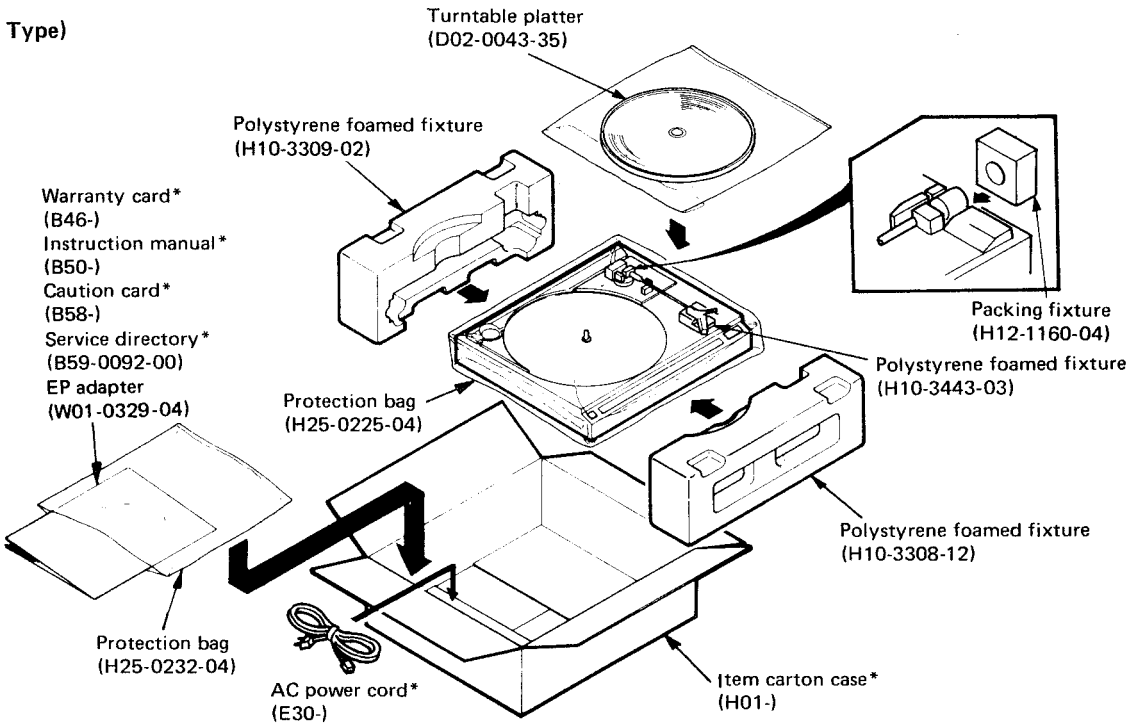


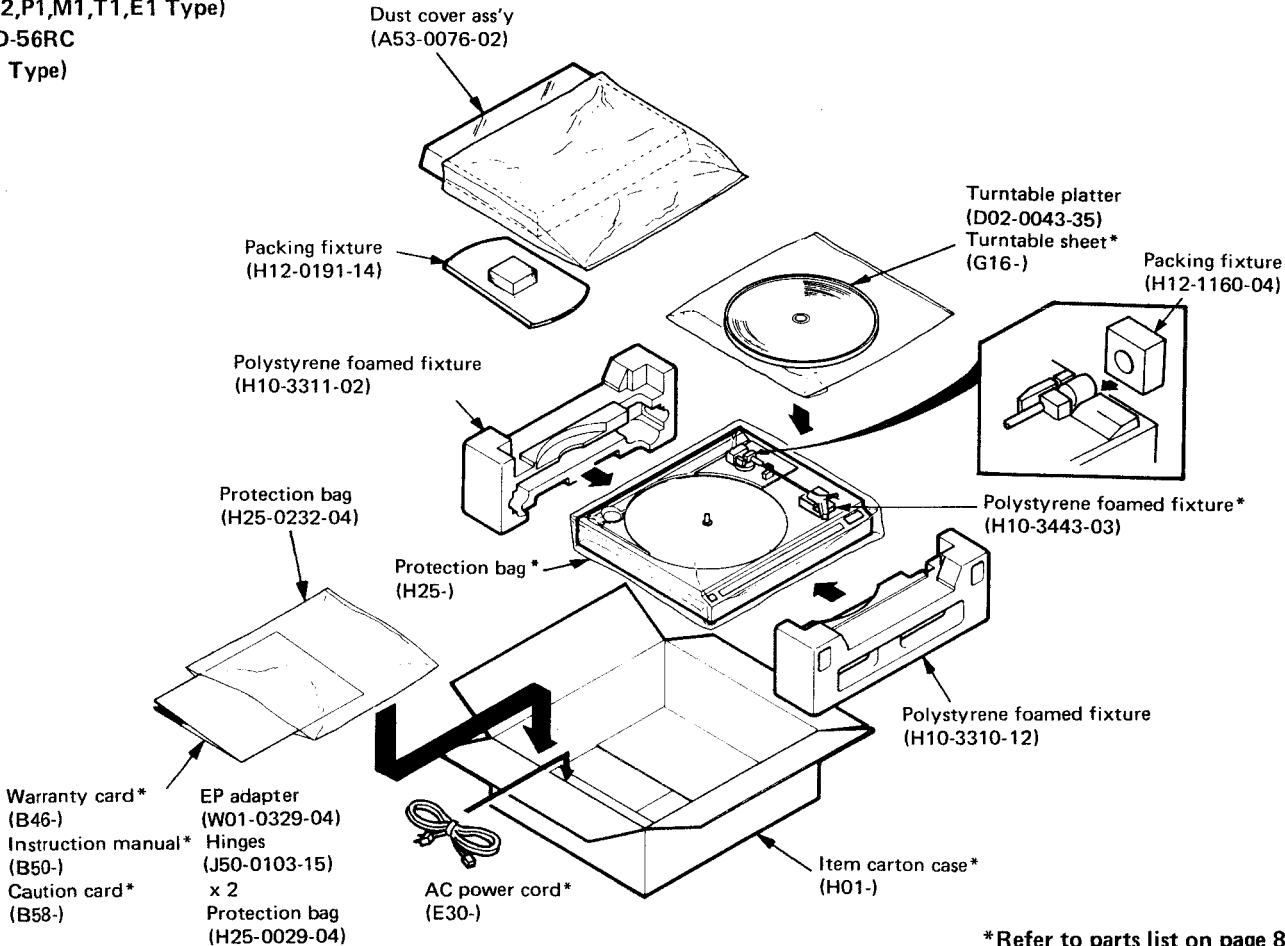
Fig. 1

# PACKING

**KD-56RCL**  
(K1,U1,UE1 Type)



**KD-56R**  
(K2,P1,M1,T1,E1 Type)  
**KD-56RC**  
(K Type)



**\*Refer to parts list on page 8.**

# PC BOARD

**X29-1560-01**

	B	C	E
Q1	1V	14.7V	0.2-0.4V
Q3, Q4	0V	15V	0V
Q5, Q6	0V	-15V	0V

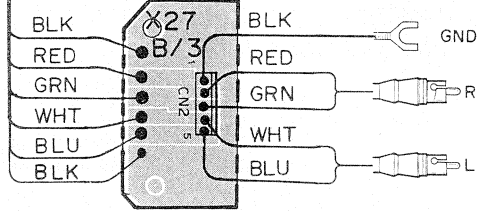
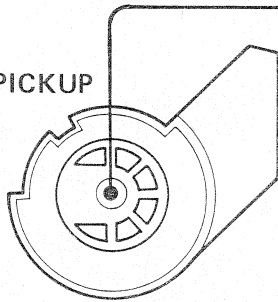
**IC1**

1	0V	12	1.5V
2-5	1.3V	13	2.3V
6	2.7V	14	2.5V
7-10	—	15	1.0V
11	2.7V	16	5V

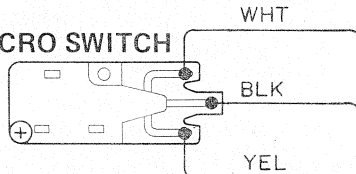
**IC2**

1-3	0V
4	-15V
5-7	0V
8	15V

**PICKUP**



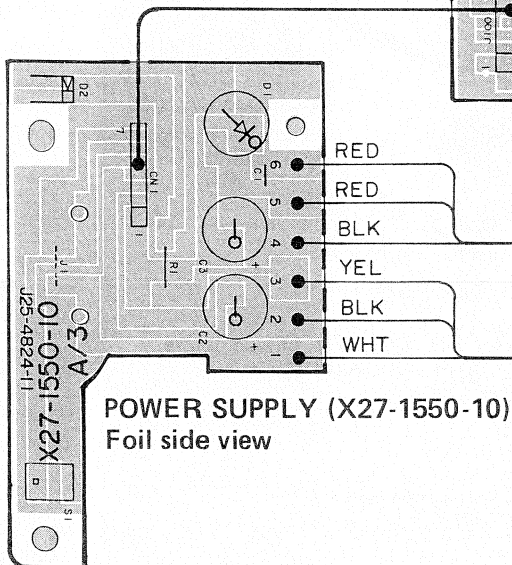
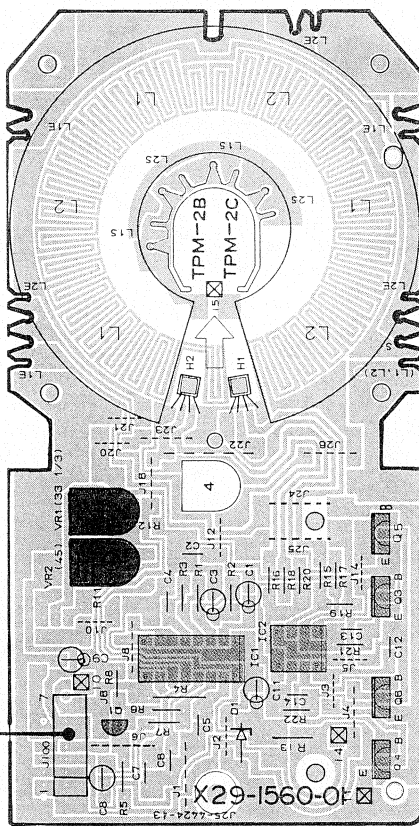
**MICRO SWITCH**



**FRONT**



**CONTROL CIRCUIT (X29-1560-01)**  
Component side view



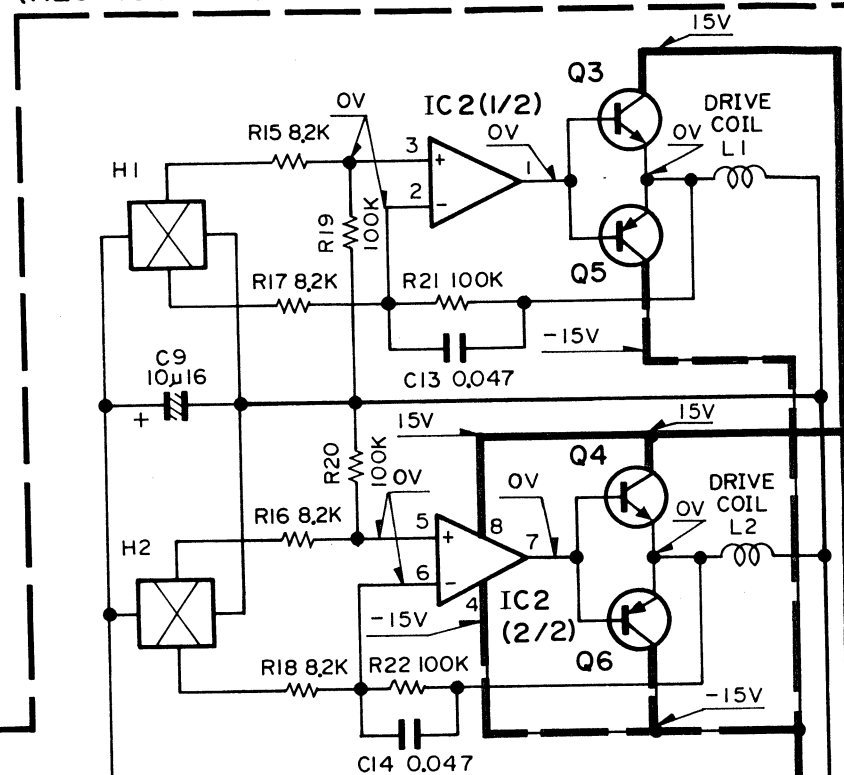
**POWER SUPPLY (X27-1550-10)**  
Foil side view

Refer to the schematic diagram for the values of resistors and capacitors.

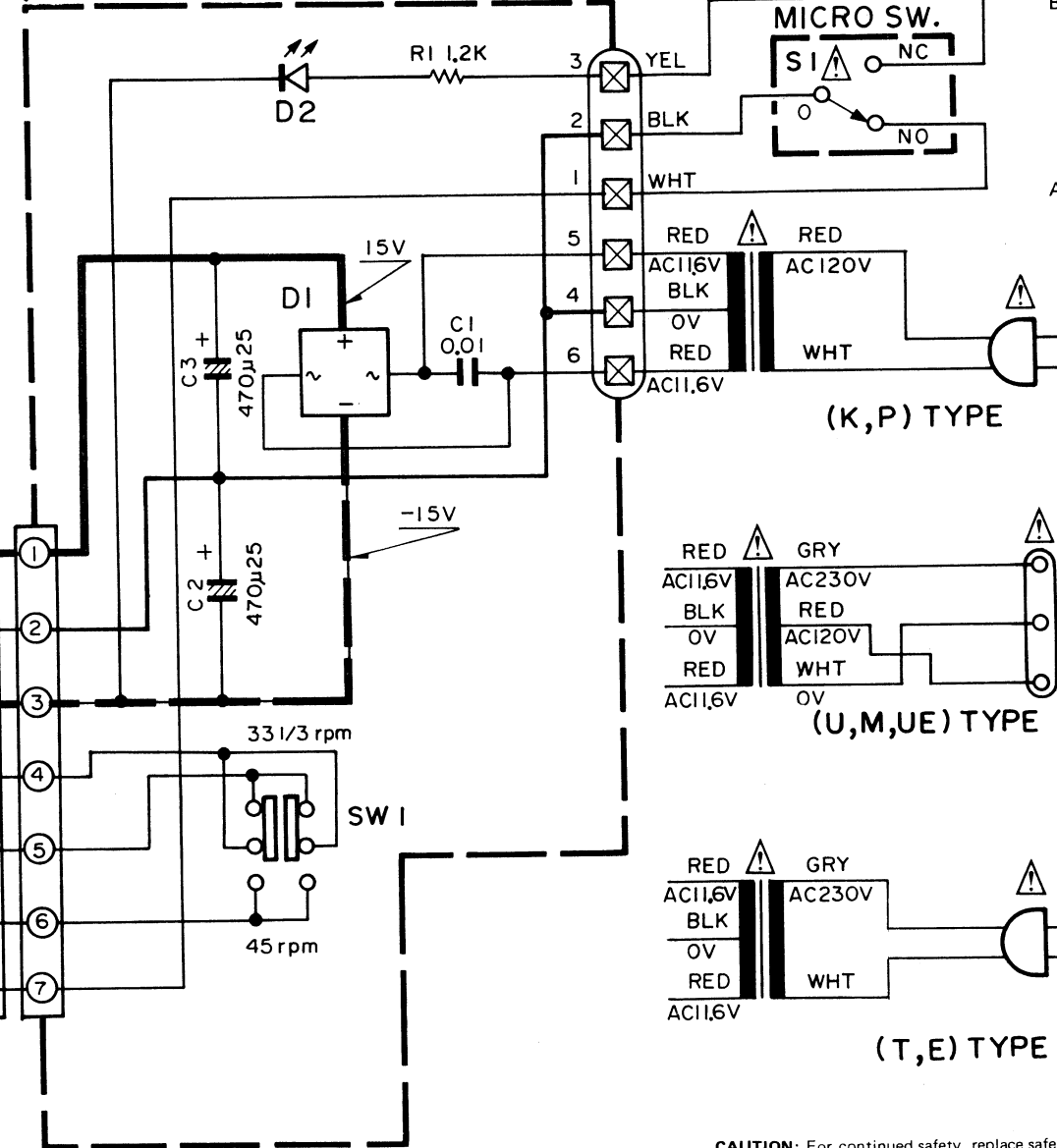
IC 1 : BA6303  
 IC 2 : AN6556  
 H1,2 : T95-0015-15  
 Q1 : 2SC945(A)(Q,P) or 2SC1685(R,S)  
 Q3,4 : 2SC3666  
 Q5,6 : 2SA1426  
 DI : RD5.1(B2)

MECHANISM ASS'Y

(X29-1560-01)



(X27-1550-10) (A/3)



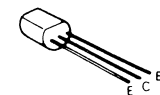
DI : W02  
 D2 : B30-0483-05  
 KD-56R(K)

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are measured with a high impedance voltmeter at 33 1/3 r.p.m. mode. Values may vary slightly due to variations between individual instruments or/and units.
- Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Près de 33 1/3 r.p.m. en mode de lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

- Die angegebenen Gleichspannungswerte wurden bei 33 1/3 r.p.m. in der Wiedergabe mit einem hoch-ohmigen Voltmeter gemessen. Dabei schwanken die Meßwerte aufgrund von unterschieden zwischen einzelnen instrumenten oder Geräten u.U. geringfügig.

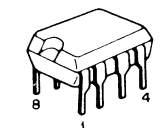
2SC1685  
 2SC945(A)



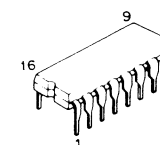
2SA1426  
 2SC3666



BA6303



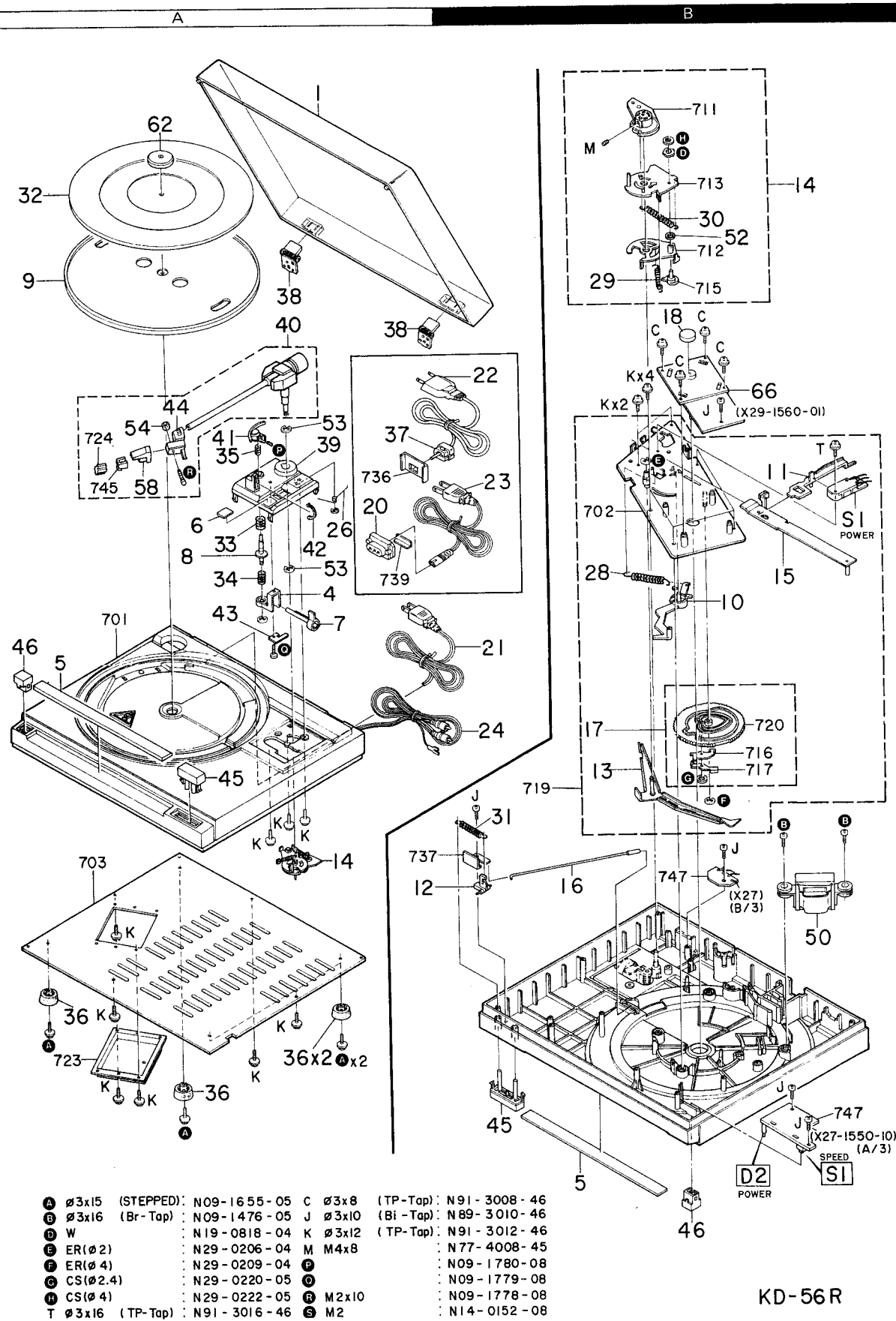
AN6556



**KD-56R**  
**KENWOOD**

KD-56R    KD-56R

## EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.

## PARTS LIST

✕ New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
<b>KD-56R</b>						
1	1A		A53-0076-02	DUST COVER ASSY	KP1M1	
1	1A		A53-0076-02	DUST COVER ASSY	T1E1K2	
4	2A	*	A15-0054-08	FRAME (TONEARM BASE)		
5	2A, 3B	*	B03-2289-03	DRESSING PLATE		
6	2A	*	B03-2284-08	DRESSING PLATE (TONEARM BASE)		
-			B46-0092-03	WARRANTY CARD	KK1K2	
-			B46-0094-03	WARRANTY CARD	U1UE1	
-			B46-0095-03	WARRANTY CARD	U1UE1	
-			B46-0121-03	WARRANTY CARD	P1	
-			B46-0122-13	WARRANTY CARD	E1	
-			B46-0143-03	WARRANTY CARD	T1	
-		*	B50-6704-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B50-6705-00	INSTRUCTION MANUAL (FRENCH)	P1M1E1	
-		*	B50-6706-00	INSTRUCTION MANUAL (SPANISH)	M1	
-		*	B50-6707-00	INSTRUCTION MANUAL (ARABIC)	M1	
-		*	B50-6709-00	INSTRUCTION MANUAL (G.D.I)	E1	
-			B58-0223-04	CAUTION CARD (PRE-SET 120V)	U1	
-			B58-0269-04	CAUTION CARD	KK1K2	
-			B58-0513-04	CAUTION CARD (PRESET 220-240)	UE1	
-			B59-0092-00	SERVICE DIRECTORY	U1UE1	
7	2A	*	D10-1911-08	LEVER (LIFTER)		
8	2A	*	D21-1325-08	SHAFT		
9	1A		D02-0043-35	TURNTABLE PLATTER		
10	2B		D10-1067-13	ARM		
11	2B		D10-1081-13	ARM		
12	2A		D10-1367-04	LEVER		
13	2B		D10-1388-03	ARM ASSY (CONNECT, R)		
14	2A, 1B	*	D10-1762-03	ARM (RETURN B ASSY)		
15	2B		D10-1394-03	SLIDER ASSY		
16	2B		D10-1402-14	ROD ASSY		
17	2B		D13-0230-03	GEAR ASSY		
18	1B		D39-0180-04	DAMPER		
△			E29-0309-05	WIRE CONNECTION CAP	KP1T1	
△			E29-0309-05	WIRE CONNECTION CAP	E1K1K2	
△	20	2A	E03-0102-25	AC INLET	U1M1	
△	20	2A	E03-0102-25	AC INLET	UE1	
△	21	2B	E30-0181-05	AC POWER CORD	KP1K1	
△	21	2B	E30-0181-05	AC POWER CORD	K2	
△	22	1B	E30-0459-05	AC POWER CORD	E1	
△	22	1B	E30-1416-05	AC POWER CORD	T1	
△	23	2B	E30-1305-15	AC POWER CORD (INLET)	U1M1	
△	23	2B	E30-1305-15	AC POWER CORD (INLET)	UE1	
24	2B		E30-1472-05	AUDIO CORD	P1U1M1	
24	2B		E30-1472-05	AUDIO CORD	UE1T1	
24	2B		E30-1472-05	AUDIO CORD	E1	
24	2B		E30-1473-05	AUDIO CORD	KK1K2	
26	2A	*	G01-2033-08	TORSION COIL SPRING		
28	2B		G01-1768-04	EXTENSION SPRING		
29	1B		G01-1165-04	EXTENSION SPRING		
30	1B		G01-1169-04	EXTENSION SPRING		
31	2B		G01-1595-04	EXTENSION SPRING		

**E:** Scandinavia & Europe    **K:** USA    **P:** Canada

**U:** PX(Far East, Hawaii)    **T:** England    **M:** Other Areas

UE : AAFES(Europe)      X: Australia

KD-56R : K2,P1,M1,T1,E1

**KD-56RC : K**

**KD-56RCL : K1,U1,UE1**

 indicates safety critical components.



## KD-56R KD-56R

## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
△ 50	3B	*	L01-7752-05	POWER TRANSFORMER	T1E1	
△ 50	3B	*	L01-7754-05	POWER TRANSFORMER	U1M1	
△ 50	3B	*	L01-7754-05	POWER TRANSFORMER	UE1	
52	1B		N14-0074-05	RETAINING RING		
53	1A, 2A	*	N29-0244-08	CANOE CLIP		
54	1A		N14-0177-08	HEXAGON NUT	KP1U1	
54	1A		N14-0177-08	HEXAGON NUT	M1UE1	
54	1A		N14-0177-08	HEXAGON NUT	T1E1K1	
A	3A		N09-1655-05	STEPPED SCREW (M3X15)		
B	2B		N09-1476-05	MACHINE SCREW (Ø3X16)		
D	1B		N19-0818-04	CORRUGATED WASHER		
E	2B		N29-0206-04	RETAINING RING (Ø2)		
F	2B		N29-0209-04	RETAINING RING (Ø4)		
G	2B		N29-0220-05	RETAINING RING (Ø2.4)		
H	1B		N29-0222-05	RETAINING RING (Ø4)		
P	1A		N09-1780-08	MACHINE SCREW		
Q	2A		N09-1779-08	MACHINE SCREW		
R	2A		N09-1778-08	MACHINE SCREW	KP1U1	
R	2A		N09-1778-08	MACHINE SCREW	M1UE1	
R	2A		N09-1778-08	MACHINE SCREW	T1E1K1	
△ S1	2B		S50-1015-05	MICRO SWITCH		
58	1A		T21-0138-05	PICKUP CARTRIDGE	KP1U1	
58	1A		T21-0138-05	PICKUP CARTRIDGE	M1UE1	
58	1A		T21-0138-05	PICKUP CARTRIDGE	T1E1K1	
62	1A		W01-0329-04	EP ADAPTER		
66	1B		X92-1050-02	MOTOR ASSY		
POWER SUPPLY UNIT (X27-1550-10)						
D2	3B		B30-0483-05	LED(SLP-170B) POWER		
C1			CK45FF1H103Z	CERAMIC 0.010UF Z		
C2 ,3			CE04KW1E471M	ELECTRO 470UF 25WV		
S1	3B		S40-2330-05	PUSH SWITCH (SPEED)		
D1			W02	DIODE		
CONTROL CIRCUIT UNIT (X29-1560-01)						
C1			CE04FW1HR22M	ELECTRO 0.22UF 50WV		
C2			CF92FV1H223J	MF 0.022UF J		
C3			CE04FW1C100M	ELECTRO 10UF 16WV		
C4			CF92FV1H223J	MF 0.022UF J		
C5			CK45FF1H103Z	CERAMIC 0.010UF Z		
C6			CF92FV1H103J	MF 0.010UF J		
C7			CQ93HP2A473J	MYLAR 0.047UF J		
C8			C90-1350-05	NP-ELEC 2.2UF 50WV		
C9			CE04FW1C100M	ELECTRO 10UF 16WV		
C11			CE04FW1C330M	ELECTRO 33UF 16WV		
C13 ,14			CK45FF1H473Z	CERAMIC 0.047UF Z		
VR1 ,2			R12-5305-05	TRIMMING PNT. (200K)SPEED		
H1 ,2			T95-0015-15	HALL ELEMENT (H-300B)		
D1		*	RD5.1(B2)	ZENER DIODE		

E: Scandinavia & Europe K: USA P: Canada  
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KD-56R : K2,P1,M1,T1,E1  
 KD-56RC : K  
 KD-56RCL : K1,U1,UE1

△ indicates safety critical components.

9

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
32	1A		G16-0343-12	TURNTABLE SHEET	P1U1M1	
32	1A		G16-0343-12	TURNTABLE SHEET	UE1T1	
32	1A		G16-0343-12	TURNTABLE SHEET	E1	
32	1A		G16-0356-02	TURNTABLE SHEET	KK1K2	
33	2A		G01-2031-08	COMPRESSION SPRING		
34	2A	*	G01-2032-08	COMPRESSION SPRING		
-		*	H01-7507-04	ITEM CARTON CASE	P1M1T1	
-		*	H01-7507-04	ITEM CARTON CASE	E1K2	
-		*	H01-7509-04	ITEM CARTON CASE	K1	
-		*	H01-7510-04	ITEM CARTON CASE	U1UE1	
-		*	H01-7511-04	ITEM CARTON CASE	K	
-			H10-3308-12	POLYSTYRENE FOAMED FIXTURE	U1UE1	
-			H10-3308-12	POLYSTYRENE FOAMED FIXTURE	K1	
-			H10-3309-02	POLYSTYRENE FOAMED FIXTURE	U1UE1	
-			H10-3309-02	POLYSTYRENE FOAMED FIXTURE	K1	
-			H10-3310-12	POLYSTYRENE FOAMED FIXTURE	KP1M1	
-			H10-3310-12	POLYSTYRENE FOAMED FIXTURE	T1E1K2	
-			H10-3311-02	POLYSTYRENE FOAMED FIXTURE	KP1M1	
-			H10-3311-02	POLYSTYRENE FOAMED FIXTURE	T1E1K2	
-		*	H10-3443-03	POLYSTYRENE FOAMED FIXTURE	KP1U1	
-		*	H10-3443-03	POLYSTYRENE FOAMED FIXTURE	M1UE1	
-		*	H10-3443-03	POLYSTYRENE FOAMED FIXTURE	T1E1K1	
-			H12-0191-14	PACKING FIXTURE	KP1M1	
-			H12-0191-14	PACKING FIXTURE	T1E1K2	
-		*	H12-1160-04	PACKING FIXTURE		
-			H25-0029-04	PROTECTION BAG (60X110)	KP1M1	
-			H25-0029-04	PROTECTION BAG (60X110)	T1E1K2	
-			H25-0225-04	PROTECTION BAG (850X450X0.03)	KP1U1	
-			H25-0225-04	PROTECTION BAG (850X450X0.03)	UE1T1	
-			H25-0225-04	PROTECTION BAG (850X450X0.03)	E1K1K2	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0625-04	PROTECTION BAG (620X740X0.03)	M1	
△ 36	3A		J02-0145-14	INSULATOR		
37	1A		J42-0083-05	POWER CORD BUSHING	P1T1E1	
38	1A		J50-0103-15	HINGE	KP1M1	
38	1A		J50-0103-15	HINGE	T1E1K2	
39	2A		J19-2773-08	TONEARM BASE ASSY		
40	1A		J91-0323-08	PICKUP ARM	KP1U1	
40	1A		J91-0323-08	PICKUP ARM	M1UE1	
40	1A		J91-0323-08	PICKUP ARM	T1E1K1	
40	1A		J91-0327-08	PICKUP ARM	K2	
41	1A		J99-0036-08	TONEARM LIFTER		
42	2A		J19-2771-08	REST HOOK		
43	2A		J21-3969-08	MOUNTING HARDWARE		
44	1A		J92-0096-08	SHELL		
-			J61-0054-05	WIRE BAND	KP1T1	
-			J61-0307-05	WIRE BAND	E1K1K2	
45	2A,3B		K29-2050-14	KNØB ASSY(BUTTON)PLAY/CUT		
46	2A,3B		K29-2080-04	KNØB ASSY(BUTTON)POWER		
△ 50	3B	*	L01-7751-05	POWER TRANSFORMER	KP1K1	
△ 50	3B	*	L01-7751-05	POWER TRANSFORMER	K2	

E: Scandinavia & Europe K: USA P: Canada  
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 KD-56RC : K  
 KD-56RCL : K1,U1,UE1

△ indicates safety critical components.

10

KD-56R KD-56R

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参照番号	位置	新	部品番号	部品名 / 規格	仕向	備考
IC1			BA6303	IC(FG TYPE SPEED CONTROLLER)		
IC2			AN6556	IC(OP AMP X2)		
Q1			2SC1685(R,S)	TRANSISTOR		
Q1			2SC945(A)(Q,P)	TRANSISTOR		
Q3	,4		2SC3666	TRANSISTOR		
Q5	,6		2SA1426	TRANSISTOR		

E: Scandinavia & Europe K: USA P: Canada  
U: PX(Far East, Hawaii) T: England M: Other Areas  
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KD-56R : K2,P1,M1,T1,E1  
KD-56RC : K  
KD-56RCL : K1,U1,UE1

⚠ indicates safety critical components.

SPECIFICATIONS

Motor and turntable

Drive System.....Direct-Drive System  
Motor.....Coreless and slotless FG ser-vo motor  
Turntable Platter.....30.0 cm (11-13/16")  
Diameter  
0.43 kg (0.95 lb) Weight  
Speeds.....2 Speeds, 33-1/3 and 45 rpm.  
Wow & Flutter.....0.028% (WRMS)  
0.05% (DIN)  
S/N (Rumble).....DIN: 43 dB (DIN A)  
DIN: 74 dB (DIN B)  
  
Tonearm  
Type.....Static-Balanced Straight  
Tonearm  
Effective Arm Length.....225 mm (8-7/8")  
Over-Hang.....15 mm (9/16")  
Tracking Error.....+ 2°50' ~ - 2°  
Usable Cartridge.....T4P Type  
  
Cartridge  
Furnished Cartridge.....MM cartridge T4P (V-67B)  
Frequency Response.....20 ~ 20,000 Hz  
Channel Separation.....Better than 22 dB (1,000 Hz)

Output Voltage.....2.5 mV  
(1,000 Hz, 5 cm/sec.)  
Output Balance.....2.0 dB  
(1,000 Hz, 5 cm/sec.)  
Load Impedance.....47 k ohms  
Stylus.....0.6 mil diamond  
Optimum Tracking Force.....1.25 grams  
Compliance.....7 × 10<sup>-6</sup> cm/dyne  
Replacement Stylus.....N-67B  
  
Miscellaneous  
Power Requirements.....AC 120 V, 60 Hz (U.S.A. and Canada Models)  
AC 220 V, 50 Hz (European Models)  
AC 240 V, 50 Hz (U.K. Models)  
AC 120 V/220-240V, 50/60 Hz (Others)  
Power Consumption.....8 watts  
Dimensions.....W 420 mm (16-17/32")  
H 118 mm (4-5/8")  
D 365 mm (14-3/8")  
Weight (Net).....4.1 kg (9.02 lb)  
Supplied Accessories.....EP adapter

Note:  
We follow a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Model name and its accessories list

Accessories	Cartridge	Dust cover
Model name		
KD-56R K2 type	X	○
KD-56R P1,M1,T1,E1 type	○	○
KD-55RC K type	○	○
KD-56RCL K1,U1,UE1 type	○	X

○ : including, X : not including

Note :  
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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